

DELMARVA FREIGHT STUDY

ECONOMIC/INDUSTRY FACTORS

DRAFT PRESENTATION
JAN 17, 2013



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of Transportation



Maryland Department
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AGENDA

- ❖ INTRODUCTIONS
- ❖ DEMOGRAPHIC/ INDUSTRY OVERVIEW
- ❖ FREIGHT DEPENDENT INDUSTRIES
- ❖ INDUSTRY MODES/ MARKETS
- ❖ INDUSTRY IDENTIFIED FREIGHT ISSUES
- ❖ GEOGRAPHIC SPECIFIC ISSUES
- ❖ SUMMARY
- ❖ DISCUSSION/ NEXT STEPS



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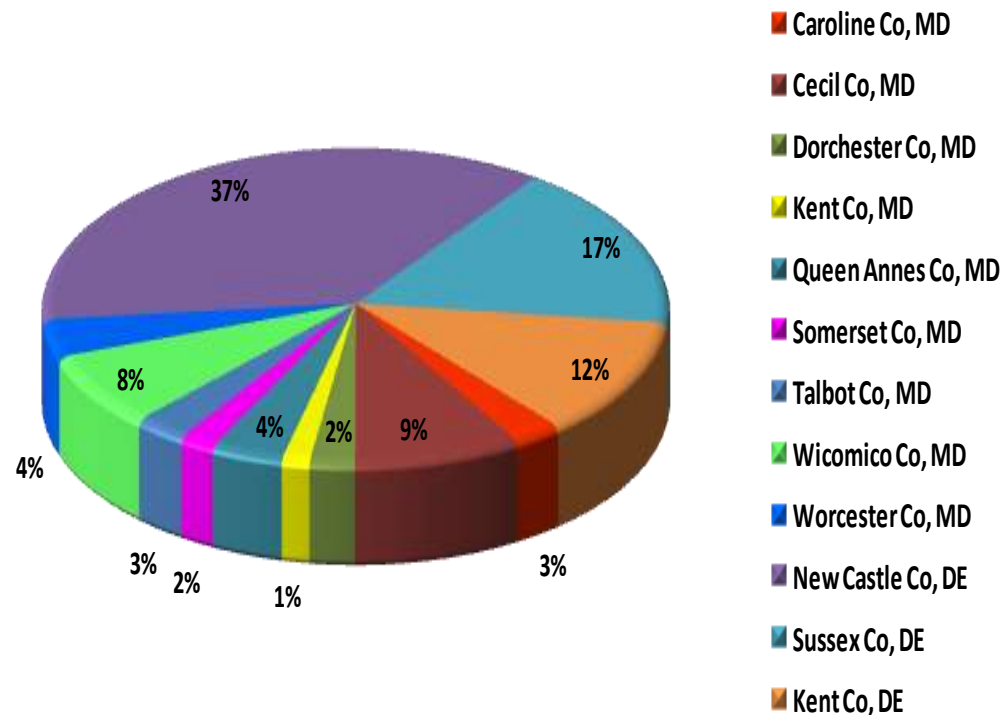


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Demographic Data Analysis Commodity Flow & Population

- ❖ Largest Concentration of Population in 2030 is Projected to in New Castle Co., Sussex Co. & Cecil Co.
- ❖ Population is Projected to Increase by 20% from 2010-2030 on the Delmarva Peninsula with Largest Increases in New Castle, Sussex & Cecil Counties.
- ❖ Secondary Traffic has a Strong Relationship to Central Population Hubs on the Delmarva Peninsula Due to Consumer Goods Movement.

2030 Projected Population Distribuion by County



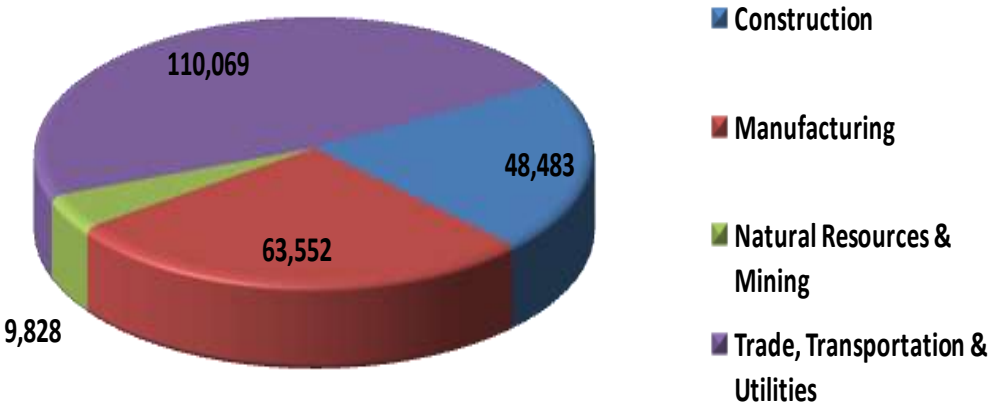
Demographic Data Analysis

Commodity Flow & Households

❖ Growth in Households will Drive Internal Peninsula Shipments of Secondary Traffic to Meet the Demand of Consumers.

❖ Employment in the Top 4 Freight Related Industries is over 1/3 Total Employment, Half of which is in Trade, Transportation & Utilities.

2011 Number of Employees by Industry



Demographic Data Analysis Continued

❖ In 2011, 30% of the Civilian Employed Population 16+ were Employed in the Trade, Transportation, Utilities & Manufacturing Industries.

❖ In 2016, 40% of the Households on the Delmarva Peninsula will Earn between \$50,000 to \$99,000 Per Year.



Summary of Economic Development Strategies

❖ **Enterprise Zones in Maryland:**

- **Worcester**: Berlin, Snow Hill, and Pocomoke City;
- **Somerset**: a 499-acre Enterprise Zone in the City of Crisfield, and a 1,297-Acre Zone in the Town of Princess Anne;
- **Dorchester**: a 247-Acre Hurlock Industrial Park, and 1,329 Acres in the City of Cambridge;
- **Wicomico**: A Two State Enterprise Zones, one in Salisbury and One in Fruitland.

❖ **Incentives and Business Programs in Maryland:**

- Real Property Tax Credit and Income Tax Credit in Worcester, Cecil, Queen Anne's, Somerset, Wicomico and Caroline Counties.
- There are HUB Zones in Worcester and Dorchester Counties.

❖ **Incentives and Business Programs in Delaware:**

- New Castle: Sowing Seeds, Growing Jobs, Partial Property Tax Exemption & Community Economic Development Grants;
- Kent: Delaware Small Business LIFT Program, Delaware Access Program & Delaware Business Finder's Fee Tax Credit.
- Distribution Hubs in Cecil County, Salisbury, Wicomico and Sussex Counties.

Issues, Opportunities & Constraints

❖ Economic Demographic Trends

- *Annual Rate of Population growth is 1% While Employment Growth 0.2%*
- *Significant Growth in Natural Resources & Mining*
 - *9% Growth Per Year*
 - *Increase from 1% to 1.5% of Overall Employment*
 - *Accounts for 45% of All Employment Growth*
 - *Highly Dependent on Barge & Rail Modes of Travel*
 - *Potential Bulk Cargo (Rail/Barge Needs Potential Gravel Export Related to Fracking).*

❖ Economic Outlook

- *Primary Growth Industries Include Healthcare, Hospitality/Tourism, Retail, Trade, and Agribusiness (Only Agribusiness Likely Exporter)*
- *Targeted Growth Industries Include: Aerospace, Bioscience, Environmental Science, Renewable Energy, & Manufacturing (Potential Exporter but Growth Uncertain)*
- *Lack of Intermodal Facilities, Rail Accessibility, Reliability, Cost, & Ease of Use are Constraints*

Freight Implications

- ❖ Population Growth Greater Than Employment Growth Implies Relatively More Freight Shipped Into & Within the Area to Serve the Population & Less Freight Shipped Out of the Area.
- ❖ Employment Growth & Exports Likely Concentrated in Existing Hubs & Areas with Available Incentives- New Castle Co. DE, Kent Co. DE, Cecil Co. MD, Worcester Co. MD, Somerset Co. MD, Dorchester Co, MD, Wicomico Co. MD.



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Delmarva Largest Freight Dependent Industries

❖ New Castle Co, DE

- DuPont (8,100 Employees)
- Astra Zeneca (4,500 Employees)

❖ Kent Co, DE

- Energizer-Playtex (560 Employees)
- Kraft Foods (580 Employees)

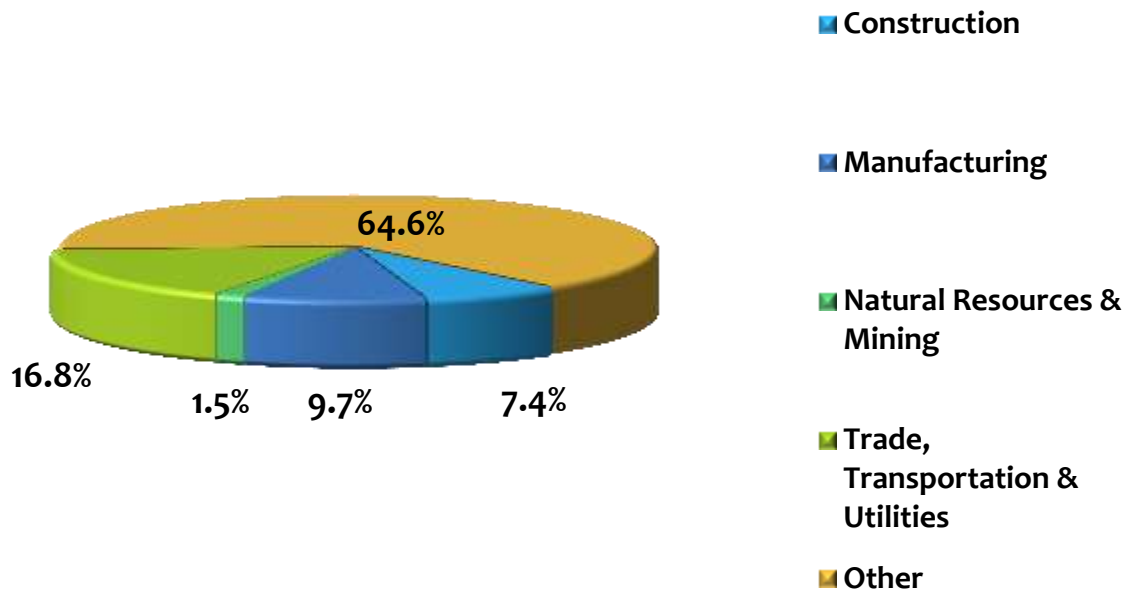
❖ Cecil Co, MD

- Gore-Tex (2,300 Employees)
- IKEA Dist Center (370 Employees)

❖ Wicomico Co, MD

- Perdue Farms (1,600 Employees)
- Labinal Salisbury (800 Employees)

2011 Civilian Employed Population
Distribution by Industry



2011 Percent of Employees provided by Maryland Department of Business and Economic Development/Factfinder 2 Table NP01 compiled by VPDA, LLC.

Industry Establishments by County

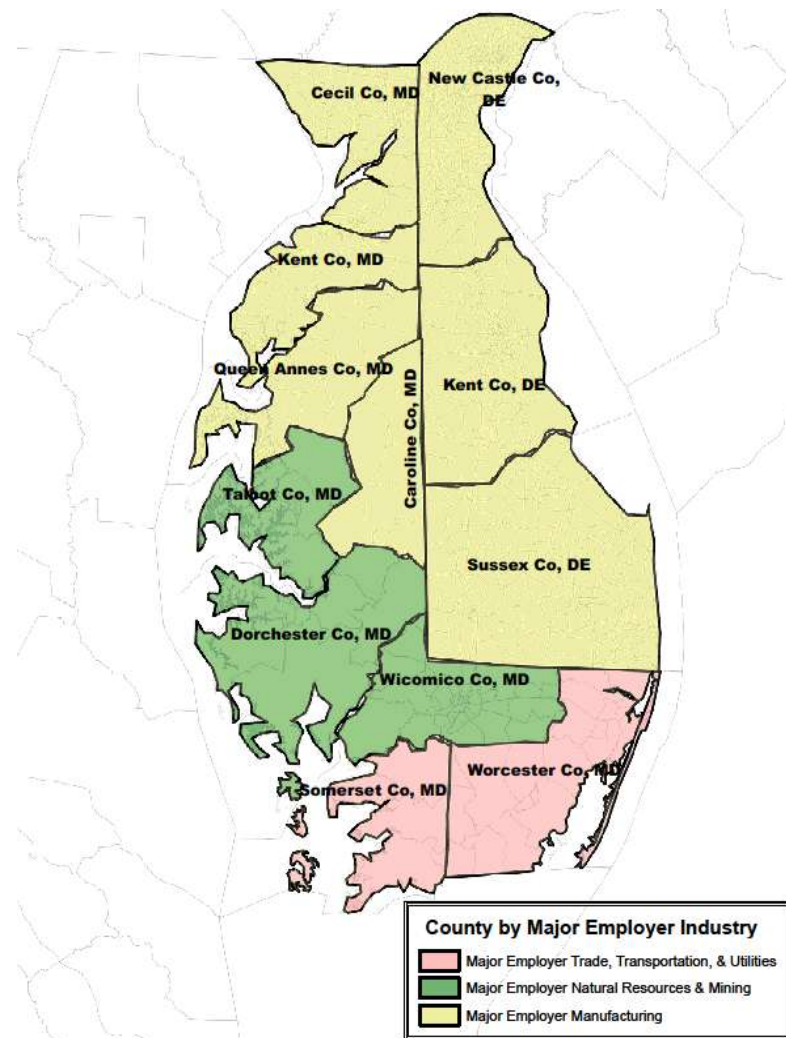
Delmarva Freight Study
Delaware & Maryland Counties
Top 10 Industry Sectors by Establishments
County Business Patterns by 3 Digit NAICS Code

Establishments by County												
NAICS Code	NAICS code description	Kent County, DE	New Castle County, DE	Sussex County, DE	Caroline County, MD	Cecil County, MD	Dorchester County, MD	Kent County, MD	Queen Annes County, MD	Somerset County, MD	Talbot County, MD	Wicomico County, MD
238	Specialty trade contractors	240	868	868	77	141	47	46	145	30	100	178
236	Construction Buildings	104	339	339	41	73	26	20	84	18	90	72
484	Truck transportation	51	130	130	28	52	30	16	30	15	9	39
237	Heavy & Civil Engineering Construction	24	63	63	8	19	9	7	15	5	17	9
488	Support activities for transportation	12	71	71	15	7	3	1	6	0	6	9
332	Fabricated metal product manufacturing	15	63	63	4	5	7	5	6	1	2	11
485	Transit and ground passenger transportation	33	32	32	5	15	14	4	8	1	2	28
323	Printing and related support activities	4	48	48	1	5	2	3	4	0	3	11
311	Food manufacturing	13	22	22	2	2	18	2	3	5	3	8
325	Chemical manufacturing	6	34	34	3	3	3	3	5	2	4	6

Source: U.S. Census Bureau-- 2010 County Business Patterns 3 Digit NAICS Code
compiled by VPDA, LLC

Delmarva Key Industries by County

- ❖ **Delmarva Major Trade, Transportation & Utilities Employers:**
 - Sysco Eastern Maryland
 - Atlantic Tractor
- ❖ **Delmarva Major Natural Resources & Mining Employers:**
 - Perdue Farms
 - Air Liquide America
- ❖ **Delmarva Major Manufacturers:**
 - ATK Aerospace & Defense
 - BASF The Chemical Company
- ❖ **Construction is a Key Industry in all Counties, Where there is Physical Growth in Industry Construction is Necessary.**



Selected Economic Outlook by Industry

- ❖ The ACC (American Chemistry Council) Noted that, Production Rose Across the Gulf Coast & Ohio Valley Areas while the Midwest, Mid-Atlantic, Southeast, Northeast and West Coast Regions Saw Declines.
- ❖ National Chemical Output is Expected to Slow to 0.5% in 2012 from 3.8% a Year Ago, and then Rise to 2.3% in 2013.
- ❖ DuPont Experienced Lower Demand Related to Titanium Dioxide & Photovoltaic Markets.

Source: Zack.com



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Economic Outlook

- ❖ Poultry Meat Had a Growth of 2.3% of World Trade from 2010 to 2011.

Source: U.S. Department of Commerce.

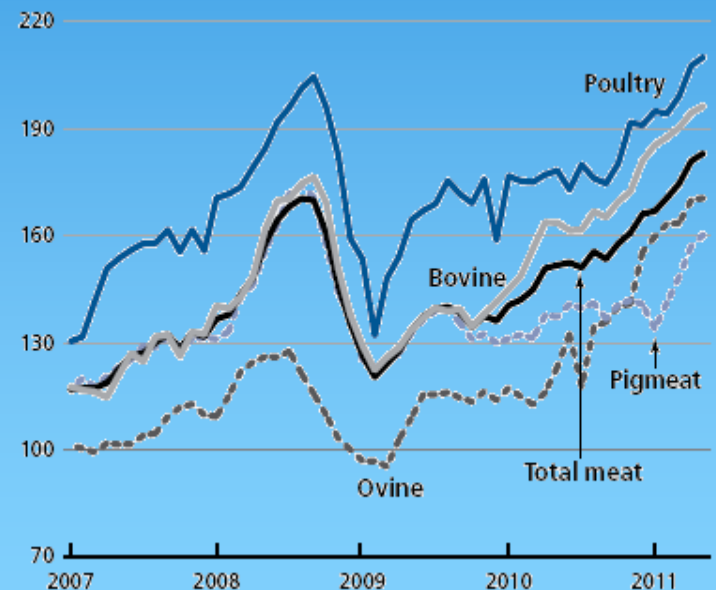
- ❖ The **Warehousing & Storage Sector** is Projected to have a High Job Growth Rate of 1.9%.

- ❖ **Transit & Ground Transportation** is Projected to Expand 2.4%.

- ❖ More Moderate Growth of About 1.0% is projected for the Trucking, Couriers, & Messengers Sector, & the Sightseeing Transportation & Support Activities for the Transportation Sector.

(Source: U.S. Department of Labor).

FAO International Meat Price Indices (2002-2004 = 100)



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Industrial Outlook

❖ National Freight Overview

- 2009: 14.7% Drop Freight Volume (tonnage)
- 2010: Rose by 5.4%
- 2012 to 2017: 2.5% Per Year Increase Anticipated

❖ Outbound Freight: The Region Generated 10.5% of the Total 11.8% of the Manufactured Goods Total 8.8% of Other Commodities.

Mid Atlantic Region Overview:

❖ The Middle Atlantic Region in 2010 Accounted for 10.7% of Total Inbound Freight, 12.0% of Manufactured Goods & 9.0% of Other Commodities.

Inbound Freight Composed of:

- 62.4% Manufactured Goods
- 37.6% Other Commodities.

❖ Outbound Freight was Composed of 62.5% Manufactured Goods & 37.5%, Other Commodities.

❖ In 2010, the Middle Atlantic States Inbound Primary Freight Tonnage Exceeded Outbound by 2%.

Source: U.S. Freight Transportation Forecast to 2023, American Trucking Association.



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Industrial Outlook

- ❖ **Trucking Costs** Rise Less Rapidly Than Do Fuel Costs Because Capital & Labor Costs are Added to the Fuel Cost to Provide the Total Truck Costs. This Holds True if Capital & Labor Costs Remain Constant, but in Recent Years these Costs have been Rising as Well, Making Trucking Cost Rise Even Faster than Just the Fuel Price Impact .

(Source: Report by Transportation Economics & Management Systems, Inc, 2008).

- ❖ **Companies** are also Increasing their Base Rate Due to Higher Operating Costs. Companies such as FedEx Freight, Con-Way Freight and ABF Freight all Announced a 6.9 % Raise on Pricing with UPS Announcing a Higher Increase by 5.9% (Source: KC Smartport Supply Chain Centered).

- ❖ **Implications for Delmarva:** Increasing Trucking Cost will have a Major Impact on the Study Area as the Predominant Mode of Freight is through Truck and Secondary Traffic.



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Industrial Outlook

- ❖ International Trade has Grown from 5% of GDP in 1950, to 20% in 2000 & Projected to Grow to 50% by 2050.

(Source: Report by Transportation Economics and Management Systems, Inc, 2008).

- ❖ Demand for Freight & Passenger Transportation is Projected to Increase by about Two-and-a-Half Times by 2050.

(Source: U.S. DOT Strategic Plan, FY 2010 – FY 2015).

- ❖ **Implications for Delmarva:** With the Growth of International Trade, Access to Ports in Wilmington, Philadelphia, and Baltimore & Hampton Roads is Critical.



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Industrial Outlook

- ❖ **U.S. Spends** Only 1.7% of its GDP on Transportation Infrastructure while Canada Spends 4% & China Spends 9% . (Source: KC Smartport Supply Chain Centered)
- ❖ **Infrastructure Deficiency** Decreases Productivity Per Worker, Critical Job Opportunities are Lost in Highly Skilled & Well-Compensated Non-Transportation Sectors Throughout the Economy. (Source; Report by American Society of Civil Engineers, 2011)
- ❖ **Implications for Delmarva:** With the Major Congestion Issues, Residential Encroachment, the Need for Improved Motor Freight, Barge & Potential Rail Service is Critical, there is a Strong need to Address the Infrastructure Deficiencies & Provide it.
- ❖ **Peak Seasonal Traffic** Coincides with the Need for Motor Freight Traffic to Serve Peak Seasonal Population, Creates Additional Congestion Issues Related to Freight Movement, Economic Stability & Quality of Life.



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Economic Outlook

- ❖ The **Warehousing & Storage Sector** is Projected to Have the Highest Job Growth Rate, Expanding From 556,000 to 664,000 Jobs Between 2004 & 2014.
- ❖ **Transit & Ground Transportation** is Projected to Grow Nearly as Rapidly, Expanding From 385,000 to 476,000 Jobs.
- ❖ **Trucks'** Share of Total Tonnage is Projected to Rise From 67.0% in 2011, to 68.9% in 2017 & 69.6% by 2023.
- ❖ Truckload (TL) Volume Will Expand 3.3% Per Year From 2012 to 2017, & 1.1% Per Year From 2018 to 2023. (Source: American Trucking Association, 2012).



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Economic Outlook

- ❖ Only in the **Railroad Transportation Sector** is Employment Projected to Decrease at the Rate of 4 % in the 2004-2014 Period. However, Output is Expected to Increase by 39%, Adding \$167 Billion Worth of Output.
- ❖ In the **Support Activities for Transportation Sector**, the 3 Occupations with the Highest Total Projected Employment in 2014 are Hand Laborers & Material Movers; Driver/Sales Workers & Truck Drivers; & Aircraft Mechanics & Service Technicians. (Source: U.S. Department of Labor).
- ❖ **Trucks'** Share of Total Tonnage will Rise From 67.0% in 2011, to 68.9% in 2017 & 69.6% by 2023. Trucks' Share of Total Revenue is Estimated at 81.7% in 2023, Versus 80.9% in 2011.
- ❖ Truckload (TL) Volume Will Expand 3.3% Per Year From 2012 to 2017, & 1.1% Per Year From 2018 to 2023. (Source: American Trucking Association, 2012).



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Industry Identified Freight Issues

- ❖ Increased Regulatory Monitoring with Motor Freight (Log Books, Park & Rest Areas, Hours of Service Limitations, Weight Limits – 80,000# in DE vs. 90,000# in VA, PA, NC, GA).
- ❖ Access to Natural Gas to Convert from Diesel Fuel.
- ❖ Uncertainty as to Fuel Tax, Toll Rates.
- ❖ Need for Fulfillment Services for Small Companies to Ship to Consumers.
- ❖ Reliability of Rail Service – Downtime, not Viable for Fresh Food Delivery, Particularly Cape Charles Rail Bridge.



Important Nodes & Markets

I-95 Freight Corridor

Cecil Co, Maryland

- ❖ Cecil Co. is Located Off I-95, in a Highly Sought After Business Location with Intermodal Linkages to Truck, Rail, Water & Air.
- ❖ Trade, Transportation & Utilities Employ's 22% of the Population in Cecil Co.
- ❖ Cecil Co. Employee's Who Work in Trade, Transportation & Utilities Accounts for 10% of the Total Employees in these Industries on the Delmarva Peninsula.



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Important Nodes & Markets

I-95 Freight Corridor

New Castle Co, Delaware

- ❖ New Castle Co. is an Urban Area with a Population of 538,170, & is Located at the Center of the NE Corridor within a 2 Hour Drive of the Largest Market in the U.S.
- ❖ New Castle Co. Employees Account for 40% of the Employed Population on the Delmarva Peninsula.
- ❖ New Castle Co. has a Top Corporate Tax Rate of 8.7% and includes Major Employer like DuPont (8,100 Employees) & Astra Zeneca (4,500 Employees).



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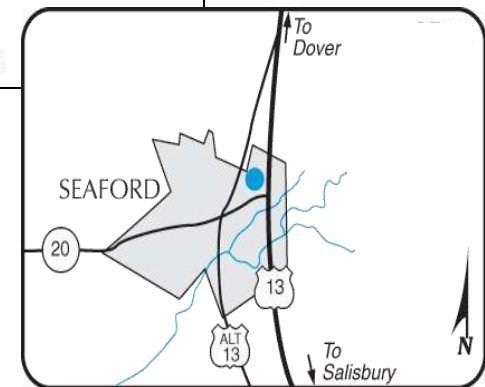
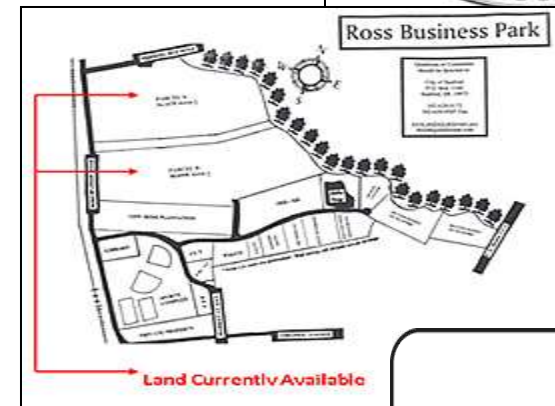


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Important Nodes & Market Cont'd

The City of Seaford, Sussex County Delaware

- ❖ Seaford is Located on U.S., 13 the Main North & South Artery on the Delmarva Peninsula from Wilmington, DE to Norfolk, VA.
- ❖ Seaford is an Important Trade Capital in the Center of the Delmarva Peninsula with 1st Class Highway Linkages to Major Metropolitan Areas.
- ❖ Seaford is an Industrial Hub with Rail Access that Serves Corporations like FedEx & Orient Chemical.



Important Nodes & Market Cont'd

The City of Salisbury, Wicomico County Maryland

- ❖ Salisbury Located on U.S. 13 Links the Lower Eastern Shore to Major Metropolitan Areas.
- ❖ The Port of Salisbury is an important Freight Hub for the Delmarva Peninsula for importing Petroleum & Grain.
- ❖ Delmarva Water Transportation Committee Estimates, "A Barge Delivering Petroleum to Salisbury is equal to 150 Tractor Trailer Trucks."



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Potential Industry Development Sites

Largest Manufacturing Hub in Maryland:

- ❖ Cecil: Terumo Medical Corporation's \$1.7 Million Product Development Laboratory;
- ❖ Wicomico: Number 1 Agricultural Producing County, Leading the State in Broiler Chicken Production;
- ❖ Dorchester: 113 Acres, Dorchester Regional Technology Park;
- ❖ Talbot: 60 Acres Easton Technology Center & 3-5 Acres Talbot Commerce Park.



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Identified Poultry/Freight Issues

- ❖ *Motor Freight Dependent – Delivery of Fresh Product Up and Down East Coast, One Day to 50% to 60% of Market*
- ❖ *Opportunities for Export – Ship VIA Motor Freight to Norfolk, Freeze and Export in Containers, Large Russian Market*
- ❖ *Rail Could be Viable for Frozen Product*
- ❖ *Use Rail at Times for Corn from Midwest, Need to Purchase 75 Car Capacity to get Discount on Freight*



PREMIUM CHICKEN PRODUCTS

Identified Agribusiness/Freight Issues

- ❖ Importance of Farmers & Accessing Product to Market
Raw Products into Processing, Domestic Feed, Export.
- ❖ Perdue Agribusiness – One of Largest U.S. Grain
Processors (350 Million Bushels + 2 Million Tons of Grain
Feed) with 2,500 – 3,000 Rail Cars Off-On Delmarva.
- ❖ DE, MD, VA. (Totals For State) Grain Production 6.8, 29.6
& 16.8 Million Bushels Respectively.
- ❖ At 850 Bushels/Semi-Truck Delaware Generates 8,000
Truck Loads.
- ❖ Majority of Movement is Motor Freight, Farmers are All
Motor Freight.



Agribusiness Motor Freight Issues

- ❖ Farmers All Motor Freight Including Use of Gravel & Secondary Roads.
- ❖ Importance of Maintenance of Secondary Roads, Bridges etc.
- ❖ Congestion, Safety Hazards on key Roads U.S. 13 & U.S. 50.
- ❖ Congestion in Urban Areas.
- ❖ Seasonal Congestion on U.S. 301, MD 404 & the Bay Bridge.
- ❖ Need For Designated Rest Areas
- ❖ Regulatory Issues-Weight Limits, Hour of Service, etc.
- ❖ Potential for Natural Gas Pipeline to Provide Alternative Fuels.

Agribusiness Rail Issues

- ❖ Reduction in Rail Utilization;
Increased Cost, Circuitous Routing,
Access, Capacity, Speed, Connections,
Intermodal Yards, Lack of Ownership of
DE Rail beds.
- ❖ Current Rail Weight Limits Cannot Utilize
286,000 # Cars, Which hold 4,000 Bushels
Equivalent to 4.7 Semi-Truck Loads.
- ❖ Northern (Amtrak) Rail Access Limited
to 75 Car Trains.
- ❖ Southern (Bay Costal Rail) is Indefinite.
- ❖ Poor Delmarva Rail Base (*Future of Indian River
Coal Plant*).



Agribusiness Waterborne Issues

- ❖ Need to Keep Rivers Dredged (Spoils Location)
- ❖ Winter Ice Issues
- ❖ Move Toward Barges Given Rail Costs.
Barges holds 50,000 Bushels (Equivalent to 59 Semi-Truck Loads)
- ❖ Access to Ports,-Export Demand 70% by 2050
- ❖ Panamax-Longer Term Impact -Size of Vessel(2 million Bushel) Which Many Ports Cannot Accommodate; Used Containers; Exports to Brazil, South America, Russia & India in Addition to China.



Delmarva Peninsula Regional Overview

Indian River Power Plant

Indian River Power Plant



Millsboro, DE

- ❖ Indian River Produces Electricity for Over 448,000 Homes on the Delmarva Peninsula, with 2 Coal-Fueled Units Totaling 560 Mega Watts with a 3rd Unit Scheduled to Shut Down at the End of 2013.
 - ❖ Indian River Will Import Less Coal in 2014 Potentially Causing an Increase in Rail Cost to other Peninsula Rail Customers.
- “Large Coal Consumers Kept RR Lines Viable, over 150 Rail Cars of Coal were Brought in Weekly to Delmarva and Now the Number is Diminishing.”

J. Wheatley Sussex Co. Dept of Economic Development

Delmarva Peninsula Regional Overview

PBF Energy Refinery

New Castle County, DE

- ❖ PBF Energy is investing \$57M to Upgrade a Rail Unloading Facility at its Delaware City Refinery.
- ❖ PBF Energy is Reducing its Reliance on Imported Crude via Ship by Importing Crude via Rail from ND & Canada.
- ❖ PBF Energy is Purchasing 2,400 Crude Rail Tank Cars to Reduce the Cost of 3rd Party Rail Car Leasing.

Crude Rail Tank Cars



PBF Refinery



Delmarva Peninsula Regional Overview

Dogfish Head Craft Brewery

Sussex, County DE

- ❖ **Planner's Approved a 26,600 Sq Ft Expansion to the Dogfish Head Brewery in Milton, DE.**
- ❖ **The Expansion will Allow the Brewery to Expand an Additional 300,000 Barrels of Beer over the Next 10 Years.**
- ❖ **The Company will Expand its Shipping & Receiving Plans from its 102,500 Sq Ft Warehouse to get Raw Materials. (All Motor Freight)**



Bottle Necks In The System

- ❖ Urban Congestion
- ❖ I -95 / Northeast Rail Corridor Congestion
- ❖ Congestion / Safety Key Roads (US 13, 50)
- ❖ Seasonal Congestion
(RT 1, 301, 404, Bay Bridge)
- ❖ Secondary Road Conditions
- ❖ Rail Service Issues
- ❖ Barge Dredging Issues



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Freight Implications Summary

General Findings

- ❖ **Emphasis on Motor Freight Given Current Mode Share, Initial/Final Freight Destinations, Population Growth, Small Business Size, Rail Reliability.**
- ❖ **Need to Address Motor Freight Congestion, Regulatory Issues, Costs, Less Than Truckload Services.**
- ❖ **Condition/Rail Service Costs Availability.**
- ❖ **Harbor/Barge Constraints, Opportunity to Enhance Barge Mode Share.**
- ❖ **Motor Freight Cost Issues and Growing Global Need to Maintain Rail and Enhance Intermodal Connections.**
- ❖ **Concentration/Clustering of Industries May Facilitate Infrastructure Investment.**

Freight Implications Summary

Concentration/Clusters of Industry by Sub Area

- ❖ Chemicals- New Castle .
- ❖ Poultry- Worcester, Wicomico.
- ❖ Manufacturing- New Castle, Cecil, Kent.
- ❖ Distribution- New Castle, Cecil Somerset.
- ❖ Agribusiness- Kent, Sussex, Dorchester, Caroline, Somerset, Talbot & Wicomico.
- ❖ Need for Freight Imports/Exports by Industries Clustered
Potential to Target Infrastructure Investments, Rail, Intermodal Investments, & Barge.
- ❖ Need to Address All Modes/Infrastructure Needs Including
Secondary Roads.
- ❖ Focus Investments by Industry/by Area.

Potential Scenarios

- ❖ **Address Future Growth Assumptions**
 - ❖ **Population -> Employment**
 - ❖ **Growth in Specific Industries (MFG, Petrochemicals)**
 - ❖ **Growth by Sub Area**
 - ❖ **Increase in Global Trade**
- ❖ **Compare Growth Assumptions with Existing/Future Bottlenecks & Infrastructure Investment Assumptions to Create a Matrix**
 - ❖ **Specific Problems/Projects**
 - ❖ **Level of Infrastructure Investments**
 - ❖ **Investment by Mode (Highway, Rail, Intermodal, Port, & Pipeline)**
- ❖ **Sub Scenario Items**
 - ❖ **Addressing / Not Addressing Bottlenecks**
 - ❖ **Differential Assumptions by Sub Area**
 - ❖ **Regulatory Factors**
 - ❖ **Cost by Mode Factors**

DISCUSSION/ NEXT STEPS



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